

Utah Department of Environmental Quality Division of Solid and Hazardous Waste



SEPTEMBER 1999

TOOELE CHEMICAL AGENT DISPOSAL FACILITY at the Deseret Chemical Depot, Utah

The chemical munitions¹ at the Tooele Chemical Agent Disposal Facility (TOCDF) are dismantled and then the components are burned. The munitions' casing, agent, and the energetic material are typically incinerated separately.

TOCDF INCINERATORS

Two **Liquid Incinerators** (LIC) are used to destroy liquid chemical agents and spent decontamination solutions. Both LICs have a primary and a secondary combustion chamber and a pollution abatement system.

The **Metal Parts Furnace** (MPF) treats metal containers, such as bombs, after the chemical agent has been drained and the explosives are removed. The MPF is a direct-fired roller hearth furnace with an afterburner followed by a pollution abatement system.

The **Deactivation Furnace System** (DFS) incinerates rockets, mines and fuses, explosives, and propellants. The DFS is a rotary kiln with a cyclone and afterburner followed by a pollution abatement system.

The LICs, MPF, and DFS each have separate pollution abatement systems consisting of a quench tower, a venturi scrubber, a packed-bed scrubber tower, and a demister. These incinerators share the same

exhaust stack called the common stack.

The **Dunnage Incinerator** (DUN) is designed to burn potentially agent contaminated wood pallets, monitoring and laboratory solids, carbon filters, and other miscellaneous solid wastes. The DUN has a ram-fed primary chamber and an afterburner followed by a pollution abatement system consisting of a quench tower, baghouse, and an exhaust stack.

The **Heating, Ventilation, and Air Conditioning System** (HVAC) prevents contaminated air from escaping the TOCDF. The air filtration system protects workers and the environment by constantly moving air from areas without agent, to areas with agent, and then through six charcoal filters. This negative air pressure system provides both clean air for the workers and total containment of agent.

Monitoring

The incinerator and HVAC stacks and munitions handling areas are continuously monitored for the presence of agent. In the event of a release, the emergency plans will be executed as needed.

In addition, various incineration parameters (CO, O₂, temperature,

pressure, etc.) are continuously monitored to ensure each incinerator is achieving good combustion conditions².

Generated Wastes

The incineration treatment process generates air-pollution-control scrubber brines, salts, ash residue, and metal parts. After the scrubber brine, salts, and ash are determined to be free of chemical agent, they are shipped to a hazardous waste disposal facility. The treated metal parts, free of chemical agent, may be sent to a steel smelter for recycling.

Additional Information

For additional information regarding the Division of Solid and Hazardous Waste's role in the chemical demilitarization activities contact:

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EQSHW/CDS/CDS-M-2.HTM](http://WWW.DEQ.STATE.UT.US/EQSHW/CDS/CDS-M-2.HTM)

¹ See Chemical Agent Fact Sheet

² See Hazardous Waste Incineration
Fact Sheet